

NATIONAL STUDENT SUMMIT ON OCEAN ISSUES

January 13-15, 2004

A Model for Inspiring Ocean Citizens



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THE 1st NATIONAL STUDENT SUMMIT ON OCEAN ISSUES

January 13-15, 2004

“Inspiring Ocean Citizens”

Summary Report

INTRODUCTION

The purpose of this summary report is to provide an overview of the National Student Summit on Ocean Issues (NSSOI), the results of that Summit, and the recommendations for planning future Summits. Coastal America’s federally designated Coastal Ecosystem Learning Centers (CELCS) were responsible for selecting high school teachers and their student delegation for the NSSOI. The Coastal America federal partners represent 13 federal agencies with coastal and ocean related missions and mandates including the White House Council on Environmental Quality. The CELCS comprise a network of our Nation’s premiere museums, aquaria, and research institutions with the ultimate goal of involving the public in protecting our nation’s coastal ecosystems. Working in partnership the federal agencies and CELCS organized the first NSSOI. The CELC staff worked with teachers in after school environments in educating students about regional, national, and global issues facing our coasts and oceans. Subsequent to the 2004 Student Summit, the U.S. Ocean Action Plan highlighted the importance of informal education and the institutions that administer to a broad public audience, particularly the Coastal Ecosystem Learning Centers. The students’ personal *Commitments to Action* and their outstanding presentations instilled our Nation’s ocean policy leaders with renewed hope and optimism about our future generation and ultimately our oceans. More importantly, the students and teachers came away from the Summit with a new awareness of the problems, needed solutions, and their role in protecting our coastal and ocean resources. During the Summit, the CELCS were highly regarded for their leadership to motivate and inspire others and to take action. Students, teachers, and CELC marine educators returned safely home where they are busy sharing their insights to people who can make a difference. Students interacted for 3 days with White House Presidential appointees, U.S. Ocean Commissioners, Members of Congress and their staff, NGO Executive Directors, senior scientists, and a cadre of national policy makers. Post-Summit, student presentations have been made to Governors, mayors, school boards, environmental commissioners, Lions Club meetings, and public television and local talk show hosts. The students’ goal is to bolster understanding about ocean concerns and increase citizen support. In addition to the students’ many commitments and personal efforts for our coasts and oceans, the students heightened awareness of the CELC network as regional leaders in implementing ocean policy. The President’s U.S. Ocean Action Plan recommends strengthening collaborative partnerships such as the CELC network and the CELC recommends Student Summits as a high priority initiative.

I. BACKGROUND & PURPOSE

For some years, educators have been expressing concern about the declining student interest in math and science courses. Some research institutes initiated programs to generate interest in students to prepare for careers in the sciences. This coupled with heightened publicity about the exploration of oceans and identifying their resources helped generate new excitement about marine environments. Trying to expose students to this exciting and relatively unexplored part of our planet motivated Coastal America with NOAA’s National Marine Sanctuary Program and the National Geographic Society (NGS)’s Sustainable

Sea Expedition Program to sponsor a series of educational Student Ocean Conferences (SOC) held at Coastal America's Coastal Ecosystem Learning Centers (CELC). NOAA/NGS provided funding and resources to host the SOC's at 10 CELCs from November 2000 to 2003. The positive results and feedback reported from these conferences prompted the Coastal America Partnership to seek funding for the 1st National Student Summit on Ocean Issues (NSSOI). Fourteen of the 15 CELCs participated in the Summit. Coastal America provided guidance and funding to the CELCs while the CELCs managed the student delegations.

II. NATIONAL STUDENT SUMMIT ON OCEAN ISSUES (NSSOI) OBJECTIVE

The Summit's purpose was to: (1) educate, inspire, and engage the next generation of leaders into the fields of marine science and environmental protection; (2) provide a student voice in policy deliberations; (3) equip students with the understanding of how science and policy intersect; and (4) inspire personal commitments to action.

While the purpose of the regional SOC's was locally focused, the NSSOI focused on a holistic perspective of national issues and competing regional priorities. The Coastal America partnership raised the necessary funds and brought students and teachers to Washington, DC to experience first hand ocean governance. From January 13 through January 15, 2004, 75 outstanding high school students participated in the 3-day Summit, along with their teachers and CELC directors. The NSSOI was envisioned to be unique from other science-related student events in that it was not enough to know the science. To make a difference, students were required to know what to do with that knowledge and how to put it to action. The Summit objective was to create a cadre of "ocean citizens," who would return home and inspire others to act upon their knowledge and understanding, thus, inspiring increased ocean citizens. Student action and results are included under Section VII of this report.

III. PLANNING THE NSSOI

Coastal America's staff and agency points of contact queried possible sponsors to determine the merit of a summit, interest level, and possible financial support. After receiving favorable responses, the project took wings. Many believe the favorable response was due in part to the Administration's emphasis on student educational programs, the recent Pew Foundation's ocean study and recommendations, and the ongoing US Commission on Ocean Policy deliberations. The timing of the Summit was scheduled to allow a student voice in the U.S. Commission on Ocean Policy and the legislatively mandated 90 day Presidential response to the Commission's recommendations.

Coastal America was tasked with obtaining the funding and the event planning. With the help of committed Coastal America partners and a committee from federal agencies and Learning Centers, planning began in late summer 2003 for a January 2004 event. Three Committees were established to guide the development of the Summit: (1) Steering Committee comprised of Coastal America Principals; (2) Planning Committee comprised of CELC Directors, Agency Representatives, Coastal America staff, and funding sponsors; and (3) a Coordinating Committee staffed through the Coastal America National Coordinating Office (See Attachment A Committee List). The National Coordinating Office made all administrative arrangements (e.g. drafting program, contacting speakers, communication with CELC Education directors on student selection and ultimate student presentations, preparation of biographical sketches of speakers, name tags, placards, press releases, status reports, collecting student presentations for power point presentations, coordinating computer setup, hotels, travel via NOAA coordinators, daily events and dinners, field trips, and various logistical arrangements and details.) Lessons learned from the 1st summit can be used as a pilot study for enhancing future summits.

The co-sponsors who funded the NSSOI were:

- The Department of Commerce, National Oceanic and Atmospheric Administration;
- U.S. Environmental Protection Agency;
- National Science Foundation;

- The National Geographic Society;
- The Coastal America Foundation;
- **Consortium for Oceanographic Research & Education;**
- The National Oceans Industries Association; and
- The Corporate Wetlands Restoration Partnership.

Funding for transportation (including airfare and cabs), hotel, and food were provided by the Coastal America sponsors. Coastal America worked with NOAA, which provided administrative support in preparing government travel orders for each member of the delegation. Feedback on logistics is that everyone arrived efficiently and on time but that transportation tickets were issued via government travel orders, with tickets issued last minute and created some concern by parents. Written updates for teachers and parents should be a part of future summits. NOAA detailed one full time professional support person in September 2004 to the Coastal America Office to begin soliciting sponsors, speakers, facilitators, and event locations. EPA provided a full time professional support person beginning in late December 2004, which is when confirmation of speakers and schedules began to firm, along with the details of events and additional Summit events and venues. A closing ceremony was added in December, along with an invitation into the White House Executive Office building, requiring additional information from the delegation and speakers for security purposes. Administrative information such as the student address and personal data e.g. DOB & SS # should be collected well in advance. That way, information is on hand for events added at the last minute requiring such information. Meal tickets for morning meals at the hotels were secured and given to each participant. Lunch and dinner meals were provided on-site at the Summit venues. All meals were paid for by the Summit sponsors. During lunch, federal scientists and other government officials and NGOs were invited to informally join student delegation tables to engage in spontaneous and non-structured conversation. The dinners were more structured. Students were asked to select an ocean topic of interest and were assigned tables accordingly with policy leaders in those fields. Members of Congress, Ocean Commissioners, and Assistant Secretaries were the hosts at each table during the National Geographic Dinners. At the National Aquarium in Baltimore dinner, table hosts were federal experts and scientists. The event came to fruition on January 13, 2004, upon the arrival of the Summit's delegates in Washington, DC for a three day Summit January 14-16, 2004.

IV. DEVELOPING THE SUMMIT AGENDA

The Planning Committee drafted an initial NSSOI agenda with recommendations by the Coastal America National Implementation Team. With guidance from the Steering Committee, a final agenda was prepared. The Coastal America Principals approved the final agenda. (See Attachment B for final Agenda.). The agenda was designed to include participation by the 13 Federal Departments in the Coastal America Partnership, the U.S. Congress, non-government organizations and corporate leaders. The goal for the agenda was for students to present their recommendations to public officials and for public officials to listen. The Coastal America National Coordinating Office sent personal letters and emails to invite distinguished speakers to include: Members of Congress, Ocean Commissioners, Presidential Appointees from the federal partnership (Departments of Agriculture, Army, Commerce, HUD, Interior, Navy, State, Transportation, the Environmental Protection Agency, and the White House Council on Environmental Quality), expert scientists, facilitators, non-governmental organizations, universities, and corporate leaders. Follow up calls and actual scheduling of distinguished speakers and allotment of time were arranged by the National Coordinating Office.

The agenda was designed for a two way exchange between students and experts so that both students and experts could ask questions, and share ideas and perspectives. One-on-one time between government officials and students was also built into the program through sit down lunches and dinners. Feedback from a majority of the students was that these activities provided a life-time opportunity and a realization that it was important to speak up because government indeed listens. Many students reported that pre-conference they felt unsure about government policy but post-government they were surprised and humbled by genuine concern and dedication of elected and public officials. Many teachers and students commented that these opportunities provided them with a confidence that they never realized and were subsequently inspired to speak to elected officials back home. A few students commented that more time was needed to interact with students from other regions but overall the agenda, while rigorous, was outstanding.

Coastal America Partners who advised, challenged, and listened to students throughout the three day Summit included: 14 Coastal Ecosystem Learning Center (CELC) directors, 6 Coastal America Principals, 3 USCOP Commissioners, a member of the U.S. House of Representatives, over 60 scientists and volunteers, the House and Oceans Caucus, the Coral Reef Task Force, University of Maryland, National Aquarium in Baltimore, and Duke Energy, a part of the Corporate Wetland Restoration Partnership.

The Student Summit in a snapshot included the arrival of 14 delegations with an afternoon/evening of registration followed by an ice breaker reception; regional presentations; interactive real-time computer activities; guest speakers; student workgroups to develop national presentations and commitments to action; questions and answers; field trips to the National Aquarium in Baltimore, the National Geographic Society, and the White House Executive Office Building. Presentations and workshops took place at NOAA's Science Center in Silver Spring, Maryland, with ample space for workshop tables and an auditorium. The NOAA Science Center was within walking distance from the hotel. Buses were used to transport the delegation to the other locations due to frigid temperatures and an extremely packed schedule. Buses worked well for the field trips because they kept students together and on time given the tight-schedules, freezing weather conditions, late evening dinners, and lengthy distances between events.

V. Implementing the Summit

While the official Agenda is included as Attachment D, the following section gives a broad summary and miscellaneous details. The Summit began Tuesday afternoon, January 13, 2004 with Summit registration at the Hilton in Silver Spring. Students arrived with their chaperones from the airport, checked into the hotel, and went to the Summit registration desk. Students received a tote bag with a Summit schedule, name tag, list of registrants, and other hand-outs provided by partners. An informal buffet enabled students to register upon arrival and casually meet each other. This was followed by an ice-breaker on the roof-top of the Hilton.

Day 1 – Wednesday, January 14, 2004:

The morning session included the usual welcomes with conference objectives and a review of the 2-1/2 day agenda followed by basic housekeeping/logistical information. There was a brief summary of the US Commission on Ocean Policy Report and its relationship to the purpose of the Summit. Students were then engaged in an interactive exercise whereby Steward Morris of National Marine Sanctuaries Program & Immersion Studios presented his interactive film, "Storm Over Stellwagen," which details the threats facing the local Stellwagen Bank National Marine Sanctuary. Computer links were set up at each of the 14 CELC student delegation tables at the NOAA Science Center for use during this and other activities. There was

technical difficulty in setting up the network for 14 stations the previous day, with unanticipated support required; however the system worked perfectly during the Summit and was a success. National Marine Sanctuaries Program & Immersion Studios introduced their interactive education teaching unit staff and students were given the opportunity to participate in the SOS interactive program. Dr. Samuel Bodman, Deputy Secretary, Department of Commerce made keynote lunch remarks. Dr. Bodman discussed careers in civil service and emphasized fields of interest involving commerce and the economy as well as coasts and oceans. Dr. Bodman joined a student table for lunch where one-on-one discussions transpired. Other experts and presenters joined student tables for discussion.

Afternoon Session:

Student delegations began their regional power point presentations. Each delegation had submitted their presentations in the weeks preceding the Summit so that the Coastal America Office could download them to one system. Coastal America staff was on-hand to trouble-shoot or assist as needed. As a regional team, students had pre-rehearsed who would give which portions of the presentation. The teams did so with efficiency, fluency, and composure. Time did not permit all to finish presentations in the afternoon and some were held until the following morning. Experts were quick to ask questions and challenge their remarks. Students said they were often surprised and challenged by the questions. Students were well prepared and answered questions thoughtfully. Top officials from the Department of Commerce, the U.S. Ocean Commission, other federal agencies, and NOAA scientists encouraged and challenged students during regional presentations at NOAA's Science Center. They stayed singularly focused on students, listening, and guiding them into the national arena of ocean governance. "Your presentations show a clear understanding of the issues," said Tim Keeney, Deputy Assistant Secretary of Commerce for Oceans and Atmosphere. Students were driven by an immediate urgency to sustain life in our oceans and influence the well-being of mankind. The students well understood that 70 percent of our Earth is covered by oceans and its marine life is in critical peril. "Along with the important hard sciences," Keeney advised, "think about other sciences such as sociology, economics, and geography--they are key links to making a difference." Student presentations included invasive species, non-point source pollution, overfishing, coral reefs, habitats and preservation, coastal development and awareness, standards, regulations, institutional structure, research funding, and enforcement. The experts reported that they were extremely impressed with the students' ability and knowledge. Student delegation Power Point Presentations can be found at http://www.coastalamerica.gov/text/soc_summit.html#Proceedings. Regional Issue Presentations by CELC student teams were:

Marine Protected Areas - *Monterey Bay Aquarium Team*

Managing Marine Protected Areas - *New England Aquarium Team*

Coral Reefs - *Waikiki Aquarium Team*

Habitat Damage Due to Bottom Trawling - *Alaska SeaLife Center Team*

Spartina: An Invasion in Progress - *Seattle Aquarium Team*

Aquaculture's Effect on Coastal Ecosystem Systems (Salmon) - *Hatfield Marine Science Center Team*

Spartina: An Invasion in Progress - *Seattle Aquarium Team*

Estuary Degradation in Texas - *Texas State Aquarium Team*

Project Clean: A Salt Marsh Restoration - *New York Aquarium Team*

Coastal Zone Management - *Dauphine Island Sea Lab Team*

Human Influences on Oyster Populations in the Chesapeake Bay - *National Aquarium in Baltimore Team*

Stormwater Run-off: The Pointless Pollutant - *The Florida Aquarium Team*

Non-Point Pollution - *Long Beach Aquarium of the Pacific Team*

Coastal Population Density Effects on Ocean Ecosystems - *South Carolina Aquarium Team*

Impacts of Coastal Development on Florida Fisheries - *IGFA Team*

The first day of activities and presentations continued into the late afternoon. The evening consisted of a field trip via chartered buses to the National Aquarium in Baltimore (NAIB) in Baltimore, Maryland. The students were greeted by the Aquarium's youth program escorts and led to the Aquarium on Wheels exhibit. The youth program members were the students that the NAIB selected as their NSSOI Student Delegation. After a full day of NSSOI activities, the NAIB delegation students met up with their colleagues from the NAIB youth program to explain their exhibits. The student delegation continued with a self-guided tour of the Aquarium along with invited experts who mingled to answer questions along the way. The student delegation met in the dining area to have a dinner with invited ocean issues experts. Each table had a placard indicating the topic of expertise and discussion for that table. Earlier that day, each student was asked to sign up for a dinner table according to topic of interest and encouraged to branch out from their regional team. Several experts were at each table and despite the long day, students and teachers engaged in lively discussion. David Pittenger, Executive Director of National Aquarium in Baltimore welcomed students to the NAIB. Cindy Angelelli, Chair, Corporate Wetlands Restoration Partnership and Director of Environment, Health and Safety and Duke Energy gave remarks on corporate involvement in community restoration. The keynote speaker for this event was Dr. Donald Boesch, President of the Center for Environmental Science at the University of Maryland. Dr. Boesch presented a lecture-style slide presentation of the issues facing the Chesapeake Bay. Dr. Boesch's presentation is located at http://www.coastalamerica.gov/text/soc_summit.html#Proceedings. After dinner the tour of the Aquarium was resumed and the evening concluded with a bus trip back to the Hilton Hotel in downtown Silver Spring, Maryland.

Day 2 – Thursday, January 15, 2004:

The morning session of day two of the Summit continued with presentations by students of their regional issues. A randomly selected student group was asked by NOAA facilitators to participate in a working

session to consolidate the regional presentations into an overall national perspective. The working session was organized with facilitators and selected speakers to prepare the National Ocean Issues Presentation by considering the regional presentations to the Ocean Commissioners. The working session was an intensive, time-sensitive session, in that the presentation had to be agreed upon and developed in time for the afternoon presentation to Ocean Commissioners hosted at the National Geographic Society. Students felt rushed but also accomplished. Students learned the notions of competing national priorities, governance, and the realities of preparing for a briefing under short time constraints, and quick-fire decision making, and compromise. Students came to Washington with scientific knowledge, and left with an understanding that the window of opportunity is short and requires compromise, decision, and action.

The selected student group presented the consolidated national summaries on the National Ocean Issues to an expert panel for critique. Students often lamented that the problems are known, so why can't somebody do something? The five expert panelist provided feedback to the students on their consolidated national presentation. The participating panelist were Dr. Don Davis, Administrator of Louisiana Coastal R&D Program, Roger Griffis of the NOAA & Coral Reef Task Force, Dr. Bruce Molnia of the House Oceans Caucus and USGS, Dr. Ken Turgeon, the Associate Director of the U.S. Ocean Commission, and Joseph Uravitch, Director of NOAA's Marine Protected Areas Center. This portion of the Summit was moderated by Margaret A. Davidson, the Director of NOAA's Coastal Services Center.

Facilitated Workgroups: After lunch the student group was split into 2 groups coordinated by experienced facilitators. Facilitators had met several times preceding the Summit to determine expectations and to design questions and sessions to facilitate the groups. In a very short time-period, students were expected to develop two consensus documents. The first was to develop a final power point presentation consolidating 1.5 days of presentations into a 20-30 minute national summary. The second document required developing personal commitments to action, producing a Proclamation of those commitments, and obtaining signatures from all student delegates. When facilitators encountered potential delays, they were skilled in moving discussion along. A few students and a teacher commented that they felt very hurried by facilitators. Overall, the facilitators succeeded in advancing student discussion, assisting in student development of national presentations and commitments, and rehearsing presentations. Group 1: The National Issue Paper facilitators and student presenters were tasked with polishing the final National Issues Presentation based upon critique from the earlier working session. Group 2: Group two consisted of the remaining student delegates tasked with polishing the Students Commitment for Action on Ocean Issues document. Between Power Point presentations and discussions with ocean experts, students developed 29 commitments to raise awareness through education, activism, and hands-on projects. Commitments are included as Attachment E. The students committed to establishing a network for high schools through the Regional Ocean Conservation Club (ROCC). Facilitators were federal employees who were trained in facilitation and had experience. The facilitators understood the time constraints of the working sessions and the expectations of Summit organizers for students to produce a product for the evening presentations and the last day presentations.

The afternoon continued with a trip to National Geographic Society (NGS) in downtown Washington, DC where students were to make their presentations to Ocean Commissioners, have dinner with Presidential Appointees and distinguished guests, and view a special presentation by the National Geographic Society. Virginia K. Tippie provided the introduction for the National Ocean Issues Presentation. Terry Garcia, the Executive Vice President of the National Geographic Society, welcomed the students to NGS. The student delegation presented their final National Ocean Issues Paper to three Ocean Commissioners and a Member

of Congress. Upon completion of the presentation the panel of Ocean Commissioners provided feedback and comments on the students' presentation. The moderator for this session was Congressman Wayne T. Gilchrest, the Chairman of the Fisheries Conservation, Wildlife and Oceans Subcommittee who encouraged students to get involved, to speak up to other elected officials, and to run for office. Students and the panel were united in their knowledge and insights. In the last 30 years, about 30 million individuals, 17 million homes and countless businesses have been added to our coastal zones; offshore oil and gas operations have expanded; marine transportation has increased; and coastal recreation and tourism have become two of the top drivers of our economy. Student recommendations included ideas for ocean governance such as integration of ocean agencies and research under one Department, adopting ecosystem planning, and creating ocean education curriculums in high schools. Commissioner Dr. Paul Sandifer remarked, "We hear your call for a new model for ocean governance. Your presentations are insightful and we are listening to you." Students emphasized the need to publicize critical information such as coastal impacts having a trillion dollar impact on the economy. "Each of you knows things about our coasts and oceans that many people do not," said Congressman Gilchrest. "But it is not enough just to know—get involved in policy; talk to your elected leaders; become land-use planners; run for office," Gilchrest recommended. After the presentations students engaged in informal conversations with the Commissioners and 16 senior policy leaders at a National Geographic Society dinner.

The evening dinner followed the student presentations. It began with a reception and dinner with 16 ocean policy leaders. Virginia Tippie, Director of Coastal America, introduced the principals, sponsors and distinguished guests. James L. Connaughton, Chairman, Council on Environmental Quality, Executive Office of the President and Chair, Coastal America gave remarks on the National Ocean Agenda and introduced the keynote speaker. The keynote speaker was Congressman Wayne T. Gilchrest who emphasized that each student needs to use the knowledge they gained at the Summit. He noted that each of the students were chosen because they know things and now they understand what to do with that knowledge. He encouraged each student to become stewards and return home and to talk to elected officials and spread through speaking and through doing. Terry Garcia, Executive Vice President, NGS and Greg Marshall, Crittercam Project Director, NGS ended the second day of activities on the topic "Exploring the Oceans." Students found the underwater Crittercam a highlight of the day. Greg Marshall spoke about his innovative film, Crittercam, created by attaching a video to the back of sea animals and witnessing the world from the animal's point of view. Students found Marshall's presentation fascinating. The second day concluded with the return of the students to the Hilton Hotel in downtown Silver Spring, Maryland.

Day 3 – Friday, January 16, 2004:

Day 3 of the Summit began with a bus trip to the Old Executive Office Building of the White House in downtown Washington, DC for the students' presentation of their Personal Commitments to Action and the Summit's closing ceremony. Chairman Connaughton welcomed the students into the White House Presidential Hall, which is used as the Press and Briefing Room. Mr. Connaughton provided a history of the room and the building. He summarized highlights of student discussions from the evening at the National Geographic and expressed his optimism for the students' abilities to make a difference. Dr. Sylvia A. Earle, the National Geographic Explorer-in-Resident delivered remarks and made personal observations about the oceans based on her many dives, expressing alarm about the rapid decline of habitat and fisheries. Dr. Earle added that with the students' involvement there is cause for hope. The students presented their conclusions and recommendations on the national issues and their Commitment to Action on ocean issues to the Coastal America Principals. After the students' final presentation was completed the Coastal America principals

responded to the presentation. Six Coastal America Principals participated at the Summit's closing ceremony in the White House's Presidential Hall. Students presented their personal *Commitments to Action* and called for a new way of governing our oceans. Suggested student solutions included creating a Department of Oceans, increasing and coordinating ocean research, and strengthening enforcement. The Coastal America Principals represented six of nine Federal agencies responsible for major ocean activities spending roughly \$650 million annually on basic and applied ocean research. There was agreement that the system needs better coordination, ecosystem-management approaches, and other new concepts. Lynn Scarlett, Assistant Secretary of Interior for Policy, Management, and Budget, expressed enthusiasm at the students' presentations. She suggested that their recommendations consider the unique, fundamental, and varying missions of individual agencies while seeking solutions for better ocean governance. Assistant Secretary of State for Oceans and International Environmental Affairs, James Turner, encouraged the students to incorporate a broader, international perspective into their regional and national solutions because they intersect with our global oceans. The Principals offered profuse praise for the students' outstanding presentations and their knowledge of issues, but were particularly impressed with how they translated that knowledge into an understanding of what action is needed to sustain our oceans. Ben Grumbles, EPA's Acting Assistant Administrator said, "The solutions that these top young leaders brought forward and their commitment to the future of our oceans are tremendously encouraging." A reception followed in the White House Indian Treaty Room with its appropriate motif of shells over marble panels, seahorses and dolphins in cast iron railing, stars for navigation in the ceiling and a compass in the center of the floor. The first National Students Oceans Summit concluded with Chairman Connaughton's presenting Certificates of Recognition to each student and teacher. The summit ended with all of the participants taking a group picture in the Indian Treaty Room. On the final day, transportation was provided for those needed to return to the hotel while others took cabs directly to the airport.

VI. SELECTION OF CELC DELEGATIONS

This section provides background on delegation selection. Respecting the CELCs working relationships in their communities and their outstanding expertise in working with schools, students, and volunteers, CELCs were delegated the responsibility for selecting their student delegations. Each CELC Education Director worked with their local network of teachers to solicit teacher and student participation. In one case, the CELC selected students from their inner city after-school program. In some cases, the CELCs interviewed and selected students from teams that attended the Regional Ocean Conferences, to build upon students existing knowledge and commitment. One CELC selected students from Student Ocean Bowl competitions because they knew would perform well as a team and could meet the high-level challenge that the NSSOI required. High school students (sophomore and up) were the agreed targeted audience. This age was agreed upon largely due to the high level of understanding and expectations, the amount of pre-Summit prep-work, and workgroup participation during the conference, coupled with post-Summit expectations. Hence, outstanding and mature students were the driving selection factors. There was limited discussion on capturing the interest of younger middle school students but this was eliminated primarily because of higher chaperone to student ratios and associated costs. Future Summits might include a delegation mentorship requirement for engaging the middle school student. Each delegation consisted of one CELC education director and one teacher (who served as both chaperones and advisors) and a team of five students. The CELC delegations are included as Attachment B. Only one CELC (Mystic Aquarium) was unable to participate due to the timing of their school's State testing schedule.

Each CELC Education Director participated in the monthly CELC conference call held by the Coastal America National Coordinating Office, which turned its agenda to the details of regional or NSSOI planning. This was an effective communication since most CELC activities during that time was student conference focused. However, agency outreach and education personnel have commented that separate planning meetings are recommended for future regional and national student conferences so that monthly conference can concentrate on network activities rather than the details of conference planning.

Participating CELCS included:

- The Seattle Aquarium
- New England Aquarium
- South Carolina Aquarium
- Dauphin Island Sea Lab
- Monterey Bay Aquarium
- Alaska Sea Life Center
- New York Aquarium
- International Game Fish Association—Fishing Hall of Fame & Museum
- Texas State Aquarium
- Hatfield Marine Science Center
- Waikiki Aquarium
- National Aquarium in Baltimore
- The Florida Aquarium
- Long Beach Aquarium of the Pacific

The following is a sampling of how CELCs selected their student/teacher delegation for the NSSOI.

Aquarium of the Pacific: Throughout the school year the Aquarium of the Pacific (AOP) was in close communication with school districts across Southern California. To alert interested teachers of opportunities offered at or in conjunction with the Aquarium of the Pacific, the Aquarium regularly sends faxes and email announcements utilizing the Aquarium's teacher database containing over 14,000 teacher contacts. A special invitation was also provided to schools that had participated in the Aquarium's 2002 Student Ocean Conference. Surprisingly, schools were not as receptive to this event as AOP had imagined. Concerns from principals and teachers suggested that this opportunity with an all expense paid trip to Washington D.C. sounded "too good to be true," and as a result, AOP decided to work with a local Long Beach school that had attended the Student Ocean Conference held at the Aquarium in 2002. Millikan High School was selected based on the interest of Mr. Eugene "Woody" Williams who teaches physics, astronomy, chemistry, earth science, marine biology and oceanography. Once the school and teacher had been identified, juniors and seniors were encouraged to create a presentation detailing a compelling ocean issue and present it to a panel of judges to determine the most qualified student representatives. The panel of judges included Amy Coppenger, Director of Education for the Aquarium of the Pacific, John McCord, Manager of Education for the Aquarium of the Pacific, Karen Brinkman, Millikan High School Principal, Mr. Williams, and a fellow science teacher at Millikan. Student presentations were evaluated based on their poise and public speaking ability, subject matter and topic relevance, and their commitment to participate in the pre-conference, after-school preparation dates.

Dauphin Island Sea Lab: The Dauphin CELC decided not to select students from just one school. They believed that by selecting each student from a different school, it would provide broader and different regional perspectives.

New England Aquarium: The high school students selected by the New England Aquarium were participants in an annual regional High School Lowell Student Ocean Summit hosted by the New England Aquarium in December 2003. The Lincoln-Sudbury students were eager, intelligent and well spoken. The students selected attended a high school outside of Boston which did not make it easy to monitor progress with the commitments to action as closely as had been anticipated.

Hatfield Marine Science Center (HMSC): Hatfield MSC selected a marine science teacher from a local high school who was a National Student Ocean Bowl (NSOB) coach/advisor and had worked with HMSC on special projects. The students were selected from essays written on why they were interested and felt they were qualified to participate in this event. An orientation, question and answer meeting was held at the school prior to the essay due date to give students background information. Prior to this the students had seen flyers posted at school to announce the conference. Counselors and teachers were also contacted for recommendations.

National Aquarium in Baltimore (NAIB): The NAIB has an after school work program for inner city schools. These students help at the aquarium in many ways, including learning about marine critters and staffing an aquarium on wheels. These students are responsible and represent the NAIB well in their community. The NAIB selected outstanding students from this after-school program as their delegation.

Texas State Aquarium: The ten teachers that attended the Texas Student Ocean Summit (Texas SOC) in November 2001 were invited to apply. Five applications were received. A three person selection committee reviewed the applications: Tara Schultz, Texas State Aquarium; Shelley Dupuy, Flower Garden Banks National Marine Sanctuary; and Dr. Rick Tinnin, University of Texas Marine Science Institute and Central Gulf of Mexico COSEE.

Criteria used to rank the applications included:

- Degree of follow-up conducted after Texas SOC
- Documentation of long-term effect of Texas SOC on any of the students
- Understanding of the purpose and scope: policy development, national/real-life issues, interaction with professionals, critical thinking and decision-making, etc.
- Process to select students
- Commitment for follow-up

The selected teacher considered the following to select students:

- Resume, with special attention given to community service/volunteer hours
- Two (2) letters of recommendation from teachers, which must be from an:
 - English or Social Studies teacher
 - Science, Math, or Technology teacher
- Short paper defining and giving possible solutions to a regional ocean issue (2 pages maximum)
 - This paper was reviewed by the selected teacher, a science/math teacher, and an English teacher

The slate of selected students was reviewed and approved by Tara Schultz, Texas State Aquarium, before the students were notified.

VII. PREPARING STUDENTS FOR SUMMIT

This section provides background on how the CELCs and teachers prepared students leading up to the Summit. The additional after school work required of each student/teacher delegation in preparing for the Summit were factors that CELCs considered in selecting the appropriate delegation. Coastal America's federal partners provided students with pre-Summit reading in preparing for their presentations in addition to the Pew Report on Oceans and the Draft of the U.S.COP. Using these documents as a starting point, each delegation selected a topic area for their project. The CELC monthly conference calls were used to discuss topics selected and to avoid duplication. This way students would learn from each other upon coming to Washington, D.C.

The topics selected were for the regional presentations were:

Regional Ocean Issue

Coastal Population Density on South Carolina Ocean Ecosystem
Coastal Development Effects on Sustainable Fisheries
Coastal Populations Effects on Habitat Loss
Pollution Effect on Oyster Populations in the Chesapeake Bay
Non-Point Pollution
Storm Water Runoff Effects on Tampa Bay Watershed
Estuarine Degradation
Invasive Species (Spartina, Mitten Crab and Green Crab)
Aquaculture's Effect on Coastal Ecosystems (Salmon)
Habitat Damage Due to Bottom Trawling
Salt Marsh Restoration
Coral Reef Conservation
Marine Protected Areas
Managing Marine Protected Areas (Stellwagen Banks)

Learning Center

South Carolina Aquarium, SC
Int'l Fish & Game Assoc, FL
Dauphin Island SeaLab, AL
National Aquarium/Baltimore, MD
Aquarium of Pacific, CA
Florida Aquarium, Tampa
Texas State Aquarium, TX
Seattle Aquarium, WA
Hatfield Marine Science Center, OR
Alaska SeaLife Center
New York Aquarium, NY
Waikiki Aquarium, HI
Monterey Bay Aquarium, CA
New England Aquarium, MA

Each CELC delegation was required to prepare a well-researched, highly polished Power Point Presentation for presentation at the Summit and to come prepared with recommendations to present to high level officials. As informal educators, the CELCs are known for outstanding student programs that are known to meet or exceed state standards. The Summit was not exception. The workload for student, teacher, and CELC educator was intense and the subject matter was rich in science, social studies, and language. The CELCs had selected students and teachers who were highly motivated and many were in gifted and talented programs. CELCs delegations provided a diverse cultural distribution. In preparing the Student delegation for the high expectations ahead of them, the CELC Education Directors personally dedicated time after hours and on weekends to guide students. They took them on field trips to visit researchers and environmental sites in order to have first hand knowledge of the issues. The educators identified researchers, solicited their support, and scheduled meetings for students to meet with local and regional

experts. These first hand meetings helped students in identifying personal commitments and they could achieve results. In many instances, these teachers and the CELC directors contributed personal expenses and time to ready the students for pre and post Summit requirements. Consideration of this expense should be factored into future Summits.

VIII. POST SUMMIT FOLLOW-UP OF STUDENT/TEACHER ACTIVITIES

Students and teachers submitted evaluation forms post summit (See Attachment F for an example evaluation form). Also, CELC Education Directors provided suggestions and lessons learned which will be useful in planning future Summits. Coastal America monitored student Commitments to Action post-Summit via CELC monthly conference calls. Each Education Director was asked to submit a 6 month and a 12 month report of student activities in keeping with the Commitments to Action. Evaluation forms were distributed to CELCs for obtaining student input (see attachment F). Each Education Director reported that preparing students for the Summit was time well spent because the Summit exceeded everyone's (student, teacher, director) expectations in terms of exposure, knowledge gained, inspiration, understanding of government programs and decision- making. A few CELC education directors said that the Summit and the students inspired their CELC to establish summer intern positions at their aquariums for high school students. Overall students remarked that before coming to Washington, D.C., that they were unaware of the roles and missions of the various federal agencies. Students reported that they departed the Summit with information about issues throughout the country and its impact globally, plus a new awareness of government initiatives, roles, and responsibilities. Many students reported that they were inspired by the government officials and wished that everyone could have a similar experience. Similarly, the government participants said they felt energized by our next generation and that they too gained insight and inspiration

The following responses were reported by CELC Education Directors in response to the question: "What Positive action(s) have students taken to implement their Commitments to Action?" Students report that the Summit provided them with the confidence and the inspiration to speak up and motivate others to take action—something they would not have readily done before the Summit.

Alaska SeaLife Center

The delegation created a website with information and links pertaining to bottom trawling impacts on coldwater coral habitat. They attended seminars with the President of the North Pacific Fisheries Management Council and asked questions about the impacts of bottom trawling. They were motivated to get involved due to the Summit and they believe their involvement and interest was at least a small part of the recent decision to create HUGE MPA's protecting areas from bottom trawling. One of the students and education directors traveled to Biloxi, Mississippi with Team Tsunami for NOSB.

Aquarium of the Pacific

The focus of the Aquarium of the Pacific's student presentation was non-point source pollution, and students identified four areas for solutions where students could make a commitment to action. Student solutions included:

1. Marketing Awareness Campaign- addressing the issue of pollution through information. (this was listed as #9 on the National Student Summit on Ocean Issues Commitment to Action)

2. Golden Can Award- an award designed to recognize and reward good “green behavior.” (this was listed as #2 on the National Student Summit on Ocean Issues Commitment to Action)
3. Elementary Education Program- students teaching students initiative. (this was listed as #1 on the National Student Summit on Ocean Issues Commitment to Action)
4. On Campus Recycling Program- student based recycling initiative. (this was listed as #3 on the National Student Summit on Ocean Issues Commitment to Action)

Recognizing that the student presentation on non-point source pollution would also provide valuable information to Aquarium guests, the students conducted a repeat PPT performance on February 26, 2004 at the Aquarium of the Pacific. The press was invited to attend this special event in addition to Aquarium visitors. As a result of this presentation, local newspapers carried stories about the threats of non-point source pollution, the students visit to Washington D.C., and their on-going crusade to make an impact on their school with a recycling initiative. Even more compelling, portions of the student presentation and interviews with the delegation were part of an *ED.news* TV show that was broadcast throughout the Long Beach Unified School District. The most successful student driven solution was the on campus recycling program championed by the delegation. Upon returning home from the Conference, the students put their plan into action and implemented a school wide recycling program that focuses on paper, plastic and aluminum items. Following the conference, two out of AOPs five student delegates became volunteers at the Aquarium. They were hired for part time summer jobs and are helping the Aquarium of the Pacific carry out our mission to instill a sense of wonder, respect and stewardship for the Pacific Ocean its inhabitants and ecosystems.

Dauphin Island Sea Lab: The Dauphin Island Sea Lab Ocean Summit students have done several things since returning from the Summit meeting in January of 2004. Upon returning students spoke to their fellow classmates about the issues that they brought to Washington. The students that were chosen for this Summit meeting all came from different schools, so they have each been able to spread their knowledge to a larger group of students. Students did a public TV spot on Alabama Public Television. The presented issues and recommendations to Congress Jo Bonhor of 1st district, raising money for their restoration plan. They gave a talk to the D.I. Foundation, spreading word about the value of coasts to other students. They made presentations (developed for the Summit) to marine biology classes in their schools. There has been progress on raising money for the Sea Oats Restoration Project and this will be an ongoing effort. Many other presentations by CELC students were given to other students in their areas. They began to work on a local organization to help protect the coast. They formed a club at school committed to campus clean-up. They organized “Planting Day” at their beaches. They created a Coloring/Activity Book on pollution to take to teach elementary school students about the harmful effects of pollution. They are engaged in trying to convince others their schools to get involved and help. Priscilla Dabney, one of the head teachers, is a Marine Biology teacher at Daphne High School. She encouraged her students to raise money to purchase sea oats to plant along the beaches to help build up the dunes that are being eroded away by nature. Her students raised over \$900. The CELC Education Director was able to get a micro-grant from the Mobile Bay National Estuary Program for \$500 to go towards purchasing and planting sea oats. They plan to use only half of the total amount to purchase sea oats, fertilizer, and stock absorb for this specific day. Another day is planned for planting in the fall of 2004 along the coast in Baldwin County near Gulf Shores, Alabama. On May 1, 2004, several of her biology students and 3 of the Dauphin CELC Summit students were able to gather and plant sea oats along the beaches of the Dauphin Island Sea Lab and around the Audubon Bird Sanctuary.

National Aquarium in Baltimore Aquarium: The student delegation returned home and began to spread the word throughout their neighborhoods that they needed to get involved and why and organized neighborhood clean-ups. Wrote a play about conservation of oysters to perform for youth. One student from the delegation was inspired by the Summit and focused her energies into volunteer efforts and the Aquarium on Wheels program and her combined efforts earned her an Up Tall Award presented by the First Lady through the Institute of Museums and Libraries. Students have planted wetlands at restoration sites. Students planted wetland ponds in schoolyards for transplanting at restoration sites.

The Florida Aquarium: Students made presentations to other students at Robinson High School sharing what they learned and encouraging best practices. Students had follow-up visits at The Florida Aquarium, interacting with staff and visitors to share information about the impact of our actions on the environment. Students made a presentation to the Environmental Protection Commission of Hillsborough County (at the Commissioner's Board Room), and they received special recognition during this televised meeting. Students served as school-wide leaders in various environmental initiatives. During a visit to the Aquarium in summer 2004, state Representative Jim Davis was briefed on the National Student Oceans Summit. The resulting student proclamation was shared with him, and our CELC emphasized the importance of students' voices being heard. The delegation asked that he keep their ideas in mind.

Hatfield Marine Science Center: Students made presentations to the Oregon Secretary of State, our local City Council, County Commissioners, Chamber of Commerce, Port Authority, School Board, Rotary Club, Optimist Club, Radio Stations, to get the message out. Students spoke to several political and civic groups in my area including the Oregon Land Board. They planted plants on shores and recycled more. They wrote to councils, legislators, and other community members to get the word out. They have given speeches all over Oregon. The students are planning on starting a ROCC chapter at their school next year.

Monterey Aquarium: The CELC delegation of students, continued, one year after the Summit, to return to the Monterey Aquarium to make presentations. Students made presentations to the Monterey Academy of Ocean Sciences (MAOS) students of Monterey High School at a forum provided at the Monterey Bay Aquarium. The CELC delegation shared the stage with local experts and policy makers in discussing the importance of Marine Protected Areas. The panel of students and experts answered questions from the audience and shared their thoughts about placement, size and configurations of marine protected areas. The CELC delegation, now high school seniors, continues to share power point presentation that their team made at the conference. Students got involved with designing MPAs in their area by working with the Resource Protection Coordinator of Monterey Bay National Marine Sanctuary and the California Department of Fish and Game, and Dr. Steve Palumbi of Stanford University's Hopkins Marine Station.

New England Aquarium

As a result of the New England Aquarium's participation in the CELC and our regional Ocean Summit, our Aquarium teen interns have expressed enthusiasm at participating in the next NSSOI. They are eager to share their knowledge of the world's oceans and to meet teens with similar interests from around the country. Most of all, our students have thoroughly impressed others about the management crisis of Stellwagen Bank National Marine Sanctuary, and are truly inspiring others to make a difference.

NY Aquarium: Student activities have included Public Speaking about coastal issues to raise community awareness.; Designed a pamphlet to inform community of problems; Attempted to get the storm drain labeling in effect against much opposition from NYC DOT; Continuing to encourage others. We are continuing to show power point presentation to everyone, every chance we got; and, we have conducted tests of the waters around Jamaica Bay and are presenting the project and information to Wildlife Conservation Society facilities.

South Carolina Aquarium

The CELC student delegation returned from the Summit inspired to instill awareness and action in others. The CELC student delegation appeared on SC educational TV-live to answer questions about their Summit experience and to discuss ocean concerns. The CELC is working with schools and the Summit students in developing community projects for local-schools to adopt as their own.

Texas State Aquarium: The students went home and presented to the Governor of Texas. The students attended beach clean-ups and try to bring ocean awareness to others. They presented to their school board and to other schools and students in their area. They got involved in beach cleanups. They made plans to present issues and recommendations to service organizations in the Rio Grande Valley. They are furthering public awareness by presentations. They are finding more groups to make our presentation for getting the word out. Some students have begun to recycle more than just paper, plastic, and glass, and have spread this quality to their neighborhoods. Students presented their recommendations and activities at the Summit to the South Texas ISD school board on February 24, 2004. It was recommended that they follow up with presentations to the student body and several Rotary/Lions/Kiwanis club chapters. The two participating juniors will be looking into presenting the recommendations next fall when school resumes. Students also participated in the spring Adopt-a-Beach clean up in April. The Texas State Aquarium provided a description of the Texas delegation's participation in the Summit to the Texas Governor's office.

Seattle Aquarium: Reported activities include volunteering during the summer to help the environment and do research at the University of Alaska Fairbanks' Fishery Industrial Technology Center on Kodiak Island. Collected for the Gulf Apex Predator (GAP) research project and the Structure of Populations, Levels of Abundance and Status of Humpbacks (SPLASH) project. The thing that's cool about SPLASH, is that scientists all over the world are collecting massive amounts of data including photos and biopsies which are all going to be compiled together and studied.

International Game and Fish Association and Aquarium: Students worked with organizations in identifying conservation projects and needs; established volunteer network base for supporting projects; established a recycling program at the IGFA Headquarters; worked with IGFA Education Director in providing website listing of volunteer needs and opportunities; established the Regional Ocean Conservation Club (ROCC) in local schools (Website www.igfa.org/ROCC.asp). The high school students are: participating in seminars, speeches and fairs as guest speakers and attendees; organizing beach clean-ups; posting fishing regulation signs; producing brochures for the public; participating in sea turtle hatchling releases; mulching and planting plants; and educating the boating public regarding the impact of pollution in the forms of plastics, fuel spills and other pollutants.

Waikiki Aquarium: The students have had greater awareness and involvement in community service; participated in picking up of trash on beaches; organized clean-up projects through Leo Club and have participated at beach clean-ups one time every month

Additionally, students were asked to provide comments about the summit. Here's what they had to say.

- “The National Ocean Summit was the most memorable experience I will ever have. The activities we did made me feel like I made a difference in the environment.”
- “I loved the summit. It taught me that the oceans are very valuable resources to everyone. It was refreshing to associate with people who share the same interests about the ocean that I do. . . especially people around my age.”
- “The summit was very successful. Members of the Ocean Commission heard numerous suggestions on what could be done to help rectify the problems that our coasts have. I personally enjoyed the summit and would attend another if given the opportunity.”
- “The summit was a life changing experience for me. I now fully understand how extremely important America's coastal ecosystems are.”
- “Future Leaders of tomorrow, can make an impact today.”
- “The summit was a great opportunity for students across the country to work together towards a common cause.”
- “I once felt that our government merely paid lip service to environmental policy; Now, I understand that our change will not be incremental, but will sweep our nation in its gravity.”
- “It was the best academic experience I ever had.”
- “The summit was very educational and a great experience for allowing students to reveal their ideas and thoughts about oceanic problems to respected officials in the field who might not have seen the problem from the students' perspective.”
- “I was inspired by the way our ideas were taken seriously by the many policy makers we met and spoke with. I think this summit was a once-in a lifetime experience and many great things could come from it.”
- “The National Student Summit on Ocean Issues was an awesome experience for all of us. As students, we were able to discuss issues that were important to us and that we were concerned about. We were able to convey a clean and comprehensive message with a diverse student voice.”
- “It was a lot of fun and would do anything to go back. I really enjoyed meeting all those people from all over the US.”
- “Considering this was the first event of its kind, the National Student Summit on Ocean Issues was a memorable and educational success. “

IX. Suggestions for Future Summits.

CELC Education Directors in the network have expressed a 2nd Student Summit as a high priority for Coastal America and have suggested a Summit every two years with the next Summit in 2006. They believe that the intense workload is too much for an annual Summit and alternating years will revitalize awareness. The CELC network indicates positive results from student interaction with national governance issues. As the U.S.COP completed its final recommendations and the President responded to their report, the CELC network is well positioned to help implement the need for coastal and ocean education. Presidential appointees and elected officials who attended the Summit witnessed first-hand the student's commitment to our coastal environment and participated in a number of one-on discussions with students who said the Summit had inspired them to pursue educational and career paths in ocean governance. One funding agency expressed concern that any future Summit needs better structure to measure outcomes in the

form of results. As such, the Coastal America National Coordinating Office has arranged for training on Project Design and Results for their office and for interested CELCs. Additionally, a number of CELCs, along with Coastal America, are participating in Free-Choice Learning and the Environment workshops designed to develop frameworks for improving the practice, evaluation, and future efforts of free-choice learning communities. Additionally, one CELC, the Hatfield Marine Science Center, has designed a Ph.D. program in Free-Choice Learning and will be an excellent advisor for the 2nd Summit Steering Committee. Suggestions also include having students keep a journal throughout the entire process to document the various stages of their education experience (pre-Summit, Summit, Post-Summit). Suggestion was also made to model the White House Conference on Cooperative Conservation Concept and to engage students in pre-summit cooperative conservation projects bringing their case students to Washington, D.C.

Students and Teachers were each asked post Summit, “How Would You Improve The Summit?” The answers primarily focused on conference planning and logistics rather than agenda substance or ocean issues. The suggestions provided will be very useful in planning future Summits. A few comments below are repetitive suggestions, but, rather than edit or suggest other than comments remarks they are included in their entirety.

The Pre Conference Suggestions:

- Provide Coastal Ecosystem Learning Centers (CELCS) with a formal invitation on Coastal America letterhead describing the program components and accommodations. This would have been helpful to alleviate parental concerns with sending their kids on a trip of this magnitude.
- Create a Coastal America official press release explaining the program that CELCs could use attract media attention. This would help raise awareness of the Summit and lend to the credibility of the program.
- Establish criteria for the student presentations. Criteria would be helpful for the pre trip preparation and set a standard for what the students are accountable for (i.e. create a presentation guideline that introduces the ocean issue, defines the issue, show effects of the issue, as well as solutions to the issue and what students can do about the issue). Having an established presentation format would naturally create sub topics that could help initiate discussion points and group topics throughout the conference.
- Ask student presentations to focus on a theme or major issue that is personally relevant to high school students so they could serve as the experts on an area they know something about (i.e. what students can do about pollution, what students need to know about sustainable seafood, how students can be involved in protecting the health of our oceans etc.). Many groups chose worthwhile ocean issues, but their recommendations were not always grounded in science and, therefore, lost the intended impact.
- It would be helpful if travel arrangements could have been solidified earlier in the planning stage. This was one area that could be improved in the future and help to reduce parent concerns.

Conference Programmatic Suggestions:

- Select guest speakers that can relate to the student audience. Students from our team were most impressed by the visit to the National Geographic headquarters and learning from the researcher who was working on the Critter Cam.

- Advise the student delegations on the themes or topics that guest speakers will be presenting so that they can be prepared with questions.
- The conference provided a lot of good information, but at some points during the event, students grew restless due to long periods of time spent sitting and listening. The conference could have benefited from allowing more time for students to break-out in smaller groups for discussion.
- The goal to create student Commitments to Action was a good idea, but due to time limitations, it proved to be a challenge to organize the thoughts of the students and led to partial ideas and redundancies. Perhaps ask students to create a “top 10” or “top 20 things students can do to save our oceans” and prioritize the ideas based on what *students* can do instead of what the world can do. This would provide a powerful message coming from students that they could take back to their schools in a more digestible format.
- The final presentation that was given to the government leaders by a few selected students had the least amount of preparation time. The student delegations came prepared with their regional issues but in many cases those issues did not make the final cut due to a variety of reasons. If the goal of the conference was having the students build consensus on the most pressing ocean issues, there was not enough time for debate or even transforming regional issues into National issues and top priorities.
- The field trips to the Baltimore Aquarium, the National Geographic Society and Old Executive Office were the highlights of the trip. Students especially enjoyed seeing these sights in Washington D.C.

Recommendations for a future conference would include:

Pre Conference Suggestions:

- Organize CELC planning team to help prepare for conference
 - Recommend themes for student presentations and establish agreed upon presentation criteria-
 - If a Commitment to Action will be part of future conferences, have students come to the event prepared with their recommendations. Students could identify personal, community, regional and national actions and arrive prepared to share them with the group.
 - Recommend relevant speakers and field trip sites
 - Help review conference agenda and assign roles for CELC staff duties
- Create Conference materials-
 - Invitation to Conference on Coastal America Letterhead
 - Conference Press Release create by Coastal America
 - Student application (may be an easier way to collect information such as birthdates and address etc. to save time for reimbursement forms)
 - Provide Conference agenda to CELCs and look for ways they can help with program
- Create Conference countdown check list that identifies important due dates for the event-
 - Utilize conference call planning time to review checklist

Conference Programmatic Suggestions:

- Involve CELC staff and teachers in leading student discussion groups and helping with conference activities.
- Schedule time in the day for breaks and break out sessions with smaller groups that commingle the delegations.
- Encourage maximum participation of all group members and select student speakers from each represented region.
- It would also be helpful to develop a system of accountability for CELCs, teachers and student delegations from across the country to contribute and follow up with their commitments to action. The suggestion by IGFA to have a Regional Ocean Conservation Clubs was a good idea, but with a limited amount of meeting time at the Conference, the good idea may have lost the momentum once teams returned home.

We would like to reiterate that the Conference provided the experience of a lifetime for the students, teachers and Aquarium staff involved. We are very grateful for the opportunity, to travel to Washington D.C. and thankful for the time and energy devoted to making this Conference possible. By providing the opportunity Coastal America recognizes the potential that students have to help shape our future

This experience provided the opportunity of a lifetime for the students who were able to participate. We would certainly encourage and would be happy to be a part of planning a 2nd National Student Summit. The lessons learned from each successful Conference will make each subsequent event a greater success.

Steering Committee

Coastal America

Virginia K. Tippie, Director, Coastal America

Executive Office of the President

Kameran Onley, Associate Director, Council on Environmental Quality

National Oceanic and Atmospheric Administration (NOAA)

Marlene Kaplan, Director, Office of Education and Sustainable Development

Dan Basta, Director, Office of Marine Sanctuaries, National Ocean Service

Rollie Schmitten, Director, Office of Habitat Conservation, National Marine Fisheries Service

National Science Foundation (NSF)

James Yoder, Division Director, Ocean Sciences Division

National Geographic Society (NGS):

Barbara Chow, Executive Director, National Geographic Education Foundation

Coastal Ecosystem Learning Centers (CELCS)

Jerry Schubel, President, Aquarium of the Pacific

Tylan Schrock, Executive Director, Alaska SeaLife Center

Planning Committee

Federal Agencies:

Joe Hartenstine, Education, NOAA

Michiko Martin/Matt Stout, Marine Sanctuaries, NOAA

Lisa Rom, Ocean Sciences, NSF

Julia Bumbaca, Fish & Wildlife Service, Interior

Drew Burnett, Environmental Protection Agency

Gene Cope, NOAA, Office of Habitat Conservation

NGS/CELCS

Amy Coppenger, Alaska SeaLife Center

Amy Haddow, Alaska SeaLife Center

Glenn Page, National Aquarium in Baltimore

Tara Schultz, Texas State Aquarium

Billie Spitzer, New England Aquarium

Coordinating Committee

Gene Cope (detailed from NOAA to Coastal America)

Marguerite Duffy (Deputy Director, Education & Outreach/ Coastal America)

Phyllis Dermer (NOAA (contractor) on site January 13-15)

**NATIONAL STUDENT SUMMIT ON OCEAN ISSUES
OFFICIAL KEYNOTE SPEAKERS & PRESENTORS**

CINDY ANGELELLI

MANAGING DIRECTOR OF ENVIRONMENT, HEALTH, AND SAFETY - DUKE ENERGY

Ms. Angelelli is responsible for identifying key EHS-related issues and trends, and developing and implementing strategic responses to them. This includes contributing to corporate and business unit strategy development, influencing environmental, health and safety-related public policy issues and engaging with external stakeholders.

Duke Energy is a diversified multinational energy company with an integrated network of energy assets and expertise. The company manages a dynamic portfolio of natural gas and electric supply, delivery and trading businesses - meeting the energy needs of customers throughout North America and in key markets around the world.

SAMUEL W. BODMAN

DEPUTY SECRETARY, U.S. DEPARTMENT OF COMMERCE

Samuel W. Bodman, a financier and executive by trade, is well suited to his role of managing the day-to-day operations of the cabinet agency with 40,000 employees and a \$5 billion budget. An engineer by training, he is well qualified for his specific oversight focus on the National Oceanic and Atmospheric Administration, the Patent and Trademark Office, and the National Institute of Standards and Technology.

Deputy Secretary Bodman has also been active in public service. He is a former Director of MIT's School of Engineering Practice and a former member of the MIT Commission on Education. He also served as a member of the Executive and Investment Committees at MIT, a member of the American Academy of Arts & Sciences, and a Trustee of the Isabella Stewart Gardner Museum.

DR. DONALD BOESCH

PROFESSOR OF MARINE SCIENCE AND PRESIDENT OF THE UNIVERSITY OF MARYLAND - CENTER FOR ENVIRONMENTAL SCIENCE

Dr. Boesch is a biological oceanographer who has conducted research in coastal and continental shelf environments along the Atlantic Coast and in the Gulf of Mexico, eastern Australia and the East China Sea. He has published two books and more than 60 papers on marine benthos, estuaries, wetlands, continental shelves, oil pollution, nutrient over-enrichment, environmental assessment and monitoring and science policy. Presently his research focuses on the use of science in ecosystem management.

The Center for Environmental Science is one of two research and service institutions in the 13-institution University System of Maryland. It conducts comprehensive research, trains graduate students, contributes to public education, and advises public agencies and others on environmental and natural resource management from its three laboratories distributed across the state. From June 2002 through October 2003, Dr. Boesch also served as Interim Vice Chancellor for Academic Affairs of the University System of Maryland.

JAMES L. CONNAUGHTON

CHAIRMAN, COUNCIL ON ENVIRONMENTAL QUALITY (CEQ)

In this capacity, Mr. Connaughton serves as the senior environmental advisor to the President as well as Director of the White House Office of Environmental Policy, which oversees the development of environmental policy, coordinates interagency implementation of environmental programs, and mediates key policy disagreements among Federal agencies, state, tribal and local governments and private citizens.

Mr. Connaughton has extensive experience helping organizations large and small become responsible environmental stewards through effective environmental management and compliance assurance systems. This work has covered the electronics, transportation, consumer products, home improvement, energy management, and mining sectors, in North America, Mexico, Venezuela and Asia.

From 1993 until 2001, Mr. Connaughton served as one of the lead U.S. negotiators of the ISO 14000 series of international environmental standards. Mr. Connaughton also worked with officials from U.S. EPA, California EPA, and the Environmental Law Institute to help form the Multi-State Work Group on Environmental Management Systems ("MSWG").

Mr. Connaughton has lectured throughout the world on international environmental standards, environment and trade, environmental management systems implementation, product regulation, and natural resource damages assessment.

MARGARET A. DAVIDSON

DIRECTOR, NOAA COASTAL SERVICES CENTER

Before joining the National Oceanic and Atmospheric Administration, Margaret Davidson was Executive Director of the South Carolina Sea Grant Consortium from 1983 to 1995. Prior to that, she served as special counsel and assistant attorney general for the Louisiana Department of Justice.

She has served on numerous local, state, and federal committees and has provided leadership for national professional societies. She has focused her professional work on environmentally sustainable aquaculture, mitigation of coastal hazards, and impacts of climate variability on coastal resources. Davidson served as the acting assistant administrator for NOAA's National Ocean Service from 2000 through 2002.

DR. DONALD W. DAVIS

ADMINISTRATOR, LOUISIANA APPLIED AND EDUCATIONAL OIL SPILL RESEARCH AND DEVELOPMENT PROGRAM,
AND THE GOVERNOR'S APPLIED COASTAL RESEARCH AND DEVELOPMENT PROGRAM

Donald W. Davis graduated from LSU with his PhD in 1973. After teaching for 17 years at Nicholls State University in Thibodaux, Louisiana, he joined LSU's research faculty in 1990. For the last 10 years he has served as the Administrator of the Louisiana Applied and Educational Oil Spill Research and Development Program in the Office of the Governor. The program has underwritten 80 projects, supported by 120 subcontracts. In addition to his work with the oil and gas industry, Dr. Davis has spent nearly 30 years investigating various human/land issues in Louisiana's wetlands and has been asked to serve as the Administrator for the Governor's Applied Coastal Research and Development Program. During his professional career he has authored or co-authored more than 100 items related to coastal Louisiana's human, industrial, and economic landscape.

DR. SYLVIA EARLE

MARINE BIOLOGIST, AUTHOR, LECTURER, SCIENTIFIC CONSULTANT, CO-FOUNDER, AND DIRECTOR OF DEEP OCEAN ENGINEERING, INC., AND PRESIDENT OF DEEP OCEAN EXPLORATION AND RESEARCH, INC

Formerly the Chief Scientist of the National Oceanic and Atmospheric Administration, Dr. Earle is an Explorer-in-Residence at National Geographic. She also serves as the first woman honorary president of The Explorer's Club in 96 years.

Earle made her first dive in 1952 at the age of 16, in the Weekiwatchee River in Florida. She wore a borrowed copper diving helmet and breathed air pumped through a hose by a compressor. Twelve years later, when Earle was preparing for her doctorate in marine botany at Duke University, she was invited to join a six-week expedition aboard Harry Truman's old presidential yacht. She was the only woman among 70 men and quickly learned the necessity and power of self-sufficiency and a good sense of humor. Six years later, she found herself part of a group of five women unexpectedly allowed to participate in the NASA aquanaut program called Tektite II. The two weeks Earle spent in the 50-foot deep underwater habitat changed her view of the ocean forever and further inspired her to "go deeper." In 1985, she made a daring solo descent to 3,000 feet in the Pacific Ocean just off the coast of San Diego. Earle still holds the record for the deepest untethered solo dive and has led more than 50 expeditions worldwide involving an excess of 6000 hours underwater.

Recognized by the Library of Congress as a "Living Legend" and recently inducted into the National Women's Hall of Fame, she is the author of more than 100 publications concerning marine science and technology, including the books, *Sea Change* (1995) and *Wild Ocean* (1999). She has participated in numerous television productions and given scientific, technical, and general interest lectures in more than 60 countries. Her books for children include *Hello Fish*; *Sea Critters*; and *Dive!*, a winner of five awards for excellence.

TERRY D. GARCIA

EXECUTIVE VICE PRESIDENT FOR MISSION PROGRAMS FOR THE NATIONAL GEOGRAPHIC SOCIETY

Terry D. Garcia is responsible for the Society's core mission programs: the Committee for Research and Exploration, Expeditions Council, Conservation Trust, Geography Education Outreach Program, Education Foundation, Development Office, Explorers Hall Museum, geography competitions, and lectures program.

Prior to joining the Society in 1999, Garcia was the Assistant Secretary of Commerce for Oceans and Atmosphere at the U.S. Department of Commerce. He was also deputy administrator of the U.S. National Oceanic and Atmospheric Administration (NOAA). In this role he directed and coordinated U.S. coastal, ocean, and atmospheric programs, including the National Ocean Service, the National Marine Fisheries Service, the Office of Oceanic and Atmospheric Research, the National Weather Service, and the National Environmental Satellite, Data, and Information Service.

HONORABLE WAYNE GILCHREST

CHAIRMAN OF THE HOUSE SUBCOMMITTEE ON FISHERIES CONSERVATION, WILDLIFE AND OCEANS, U.S. CONGRESS

As Subcommittee Chair, Mr. Gilchrest oversees the management of our nation's fisheries. The committee also has jurisdiction over all wildlife refuges, including Blackwater National Wildlife Refuge in the 1st Congressional District. Gilchrest has an ambitious agenda as chairman, and hopes to focus attention on the maintenance problems plaguing our wildlife refuges. He will also be reviewing our nation's fisheries management, and recommending changes to that important system. The committee is critical to the 1st District of Maryland where thousands make their living from the water.

He also serves as a senior member of the House Resources Committee and the House Transportation Committee, and serves on the Water Resources and Environment Subcommittee, and the Subcommittee on National Parks, Recreation and Public Lands, and the Subcommittee on Coast Guard and Maritime Transportation. He is also a member of the House Science Committee. He is Chairman of the Chesapeake Bay Watershed Task Force, and co-chairs the House Climate Change Caucus, and the House Corps Reform Caucus. This year, he helped organize the House Organic Caucus and will serve as its co-chairman. He's also a member of the House Rural Health Care Coalition.

ROGER GRIFFIS

COORDINATOR, CORAL REEF CONSERVATION PROGRAM -- NOAA

Mr. Griffis is responsible for overseeing planning, budgeting, implementation and evaluation of the Program. The Program mission is to support effective management and applied science to conserve and restore valuable coral reef ecosystems and the communities that depend on them. The goal is to reduce the loss and degradation of coral reefs, working with government and non-governmental partners.

Mr. Griffis has a background in biology (BA, Carleton College) and marine ecology (MS, University of California), and worked from 1994-2001 as Policy Advisor for ocean and coastal issues in NOAA's Office of Policy and Strategic Planning.

BENJAMIN H. GRUMBLES

DEPUTY ASSISTANT ADMINISTRATOR FOR THE OFFICE OF WATER AT U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

Before coming to EPA, Mr. Grumbles was Deputy Chief of Staff and Environmental Counsel for the House Science Committee since February 2001. Prior to that, he was Senior Counsel for the Water Resources and Environment Subcommittee of the Transportation and Infrastructure Committee. During his 15 years of service on the Transportation and Infrastructure Committee staff, Ben focused on programs and activities of the Environmental Protection Agency, the Army Corps of Engineers, the National Oceanic and Atmospheric Administration, the U.S. Department of Transportation, the Federal Emergency Management Agency, and the Tennessee Valley Authority. He is also an adjunct professor of law at the George Washington University Law School, as well as a member of the faculty advisory board of the Environmental Law and Policy Program at the USDA/Graduate School. He currently teaches courses in water pollution control, the Clean Water Act, and environmental policy. Mr. Grumbles has written numerous articles on water quality, wetlands, water resources management, oil spills, hazardous waste, and environmental policy. His degrees include a B.A., Wake Forest University; J.D., Emory University; and LL.M. in Environmental Law, the George Washington University Law School.

TIMOTHY R.E. KEENEY

DEPUTY ASSISTANT SECRETARY OF COMMERCE FOR OCEANS AND ATMOSPHERE

At NOAA, Mr. Keeney is responsible for environmental policy, strategic planning and program analysis. Mr. Keeney's major responsibilities include crosscutting programs such as coral reefs, climate, habitat restoration, and observation systems. During his career, Mr. Keeney has held several environmental management and regulatory positions, including NOAA General Counsel, and director of Ocean and Coastal Resource Management at NOAA's National Ocean Service. He served as Commissioner for the Connecticut Department of Environmental Protection and Director of the Rhode Island Department of Environmental Management. Keeney was also President of Dufrane Nuclear Services, Inc. in Avon, Conn.

PAUL L. KELLY

MEMBER, U.S. COMMISSION ON OCEAN POLICY

Paul L. Kelly is the senior vice president of Rowan Companies, a global provider of offshore contract drilling and helicopter services. He recently received a Public Service Commendation from the U.S. Coast Guard after seven years of service on the National Offshore Safety Advisory Committee. The International Association of Drilling Contractors recently named him the 2000 Contractor of the Year. Mr. Kelly represents the oil service and supplies industry on the U.S. Department of the Interior's Outer Continental Shelf Policy Committee, and served as chairman from 1994 to 1996. He has written widely on energy policy and is a member of the editorial board of *World Oil*.

CHRISTOPHER L. KOCH

PRESIDENT AND CHIEF EXECUTIVE OFFICER, WORLD SHIPPING COUNCIL

The World Shipping Council is a trade association, composed of international liner shipping companies serving the U.S. import and export trades, that is interested in government policies that affect ocean commerce and the marine environment. Mr. Koch served as Senior Vice President and General Counsel for Sea-Land Service, Inc, and was a senior executive at CSX. From 1990 to 1993 he served as chairman of the Federal Maritime Commission (FMC) as an appointee of President George Bush. He came to the FMC after a decade of work in the U.S. Senate, where he held positions as counsel to the Senate Commerce, Science, and Transportation Committee and the National Ocean Policy Study, and served as chief of staff to Senators Slade Gorton and John McCain.

TONY MACDONALD

EXECUTIVE DIRECTOR, COASTAL STATES ORGANIZATION (CSO)

The CSO represents the interests of Governors of the nation's thirty-five coastal states, including the Great Lakes states and island territories, on legislative, policy and regulatory issues relating to coastal resources. Prior to joining CSO, Mr. MacDonald was the Special Counsel and Director of Environmental Affairs at the American Association of Port Authorities (AAPA) for six years. He has also practiced law with a private firm in Washington, DC, and served as the Washington environmental legislative representative for the Mayor of the City of New York.

CHRISTOPHER MANN

DIRECTOR OF POLICY, SEA CHANGE AND FORMER DIRECTOR, OCEAN AND COASTAL POLICY, PEW OCEANS COMMISSION

Chris Mann serves as policy director of the Center for SeaChange. Prior to joining the SeaChange staff, Chris served as the coastal policy director for the Pew Oceans Commission. Mr. Mann previously managed legislative affairs on international environmental and economic issues at the State Department. Before joining the State Department, he worked for nine years for the House of Representatives on marine resources conservation and management; first for the Committee on Merchant Marine and Fisheries and later for the Committee on Resources. His areas of expertise include coastal zone management, marine protected areas, marine pollution, and global climate change.

GREG MARSHALL

EXECUTIVE PRODUCER/DIRECTOR, REMOTE IMAGING, NATIONAL GEOGRAPHIC TELEVISION AND FILM FOR THE NATIONAL GEOGRAPHIC SOCIETY

In practice, Mr. Marshall is a marine biologist, inventor, filmmaker, producer, and cinematographer. He began his career as a freelance photojournalist and cameraman. He then served as director of a marine research program for

three years with USAID. While in that position he produced a film about fisheries and habitat in Belize that encouraged the U.S. government to appropriate millions of dollars for conservation of that country's unique marine ecosystem. Also in Belize, snorkeling among the coral reefs, the sight of a remora-a commensal fish-attached to the side of a shark struck him. Imagining the unique perspective the remora must have when "hitchhiking" with its host, he conceived of creating a remote camera to mimic this behavior. If it were small and light enough, the imaging system could be attached in much the same fashion, to record the behavior of sea creatures in ways that a hand-held camera never could. Thus began the development of "CRITTERCAM."

In 1991, Mr. Marshall joined National Geographic Television and established the Special Projects Unit, where he pioneered CRITTERCAM technology. The camera attaches benignly to an animal and documents life from its perspective, recording video, hydrophonic audio, depth, temperature, light level, and velocity. In addition to collecting critical research data for science, CRITTERCAM also provides images that capture audiences' imagination. The first breakthrough images were broadcast to the world on National Geographic EXPLORER in 1993. Since then he has expanded use of this research tool to more than 30 other marine species, including great white sharks, sperm whales, emperor penguins, walruses, seals, sea turtles, and killer whales. With the success of his ongoing marine research program, he and his team have now launched a Terrestrial CRITTERCAM effort to help unveil the hidden lives of lions and tigers and bears. He is a two-time Emmy Award winner for Cinematography and Sound, and he currently is producing a 13-part scientific adventure series, called CRITTERCAM Chronicles, for the National Geographic Channel. Mr. Marshall is an enthusiastic presenter who brings scientific knowledge, creative ingenuity, and a wealth of experience to his audiences.

DR. BRUCE MOLNIA

RESEARCH GEOLOGIST, U.S. GEOLOGICAL SURVEY (USGS)

Dr. Bruce Franklin Molnia has conducted marine, coastal, glacial, and remote sensing research for more than 35 years. Through 2003, Dr. Molnia served as a Senior Legislative Fellow in the Office of Congressman Curt Weldon (R-PA), working to assist Congressman Weldon and about 50 other House Members in forming and operating the House Oceans Caucus. Prior to starting the Oceans Caucus, Dr. Molnia served as the USGS Chief of International Programs. Dr. Molnia is currently an Adjunct Professor at Duke University's Nicholas School of the Environment, Durham, NC; a Research Affiliate at the Prince William Sound Science Center, Cordova, AK; and an Affiliate Professor at the University of Idaho, Department of Geology, Moscow ID, where he is part of the teaching faculty for the Juneau Icefield Research Project (JIRP). Most of Molnia's research has been in Alaska. Dr. Molnia has authored, coauthored, or edited more than 200 articles, abstracts, maps, and books, as well as several CD-ROMs. In his capacity as the Forum Editor of GSA TODAY, the newspaper of the Geological Society of America, Dr. Molnia wrote more than 100 monthly columns. Books that Dr. Molnia has authored include: Glaciers of Alaska, Glacial-Marine Sedimentation, Alaska's Glaciers, and the Alaska chapter of the Satellite Image Atlas of the Glaciers of the World. Dr. Molnia was awarded a Ph.D. in marine geology from the University of South Carolina in 1972, a M.A. in marine geology from Duke University in 1969, and a B.A. in geology from Harpur College, State University of New York at Binghamton in 1967.

STUART MORRIS

VP SALES & MARKETING, IMMERSION STUDIOS

At Immersion Studios Inc., Mr. Morris is responsible for directing the company's sales and marketing. Mr. Stuart has 15 years of progressive experience starting with top-tier international companies including Kraft Foods, Pepsi and Duracell where he consistently delivered exceptional results. Prior to Immersion, he was the Vice President of Sales, Marketing and Communications at Bell ExpressVu, which is Canada's largest satellite TV company. At ExpressVu, he grew the business from zero to 1.3 million customers and created their interactive TV business.

DR. DAVID PITTENGER

EXECUTIVE DIRECTOR, NATIONAL AQUARIUM IN BALTIMORE

Under Mr. Pittenger's tenure, the NAIB has adopted a strategic planning process that guides the organization's day-to-day work and long-term activities. In collaboration with the Board of Governors, he is guiding the continuing development of the Master Plan adopted in 1998 and the coordination of the fundraising efforts to support the Master Plan. Mr. Pittenger received his B.S. from Cornell University and his M.A. from University of Pennsylvania. He originally joined the Aquarium in 1979 and has held increasingly responsible positions including Director of Education, Project Manager for construction of the \$40 million Marine Mammal Pavilion and Senior Director of Programs. He was appointed Deputy Executive in 1992 and appointed Executive Director of the Aquarium in January 1995. He has also served as Executive Director of the Gulf of Maine Aquarium and has held positions at the Everglades National Park and the Academy of Natural Sciences in Philadelphia. As Executive Director, he is responsible for all operations of the Aquarium.

DR. PAUL A. SANDIFER

SENIOR SCIENTIST FOR THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION'S NATIONAL CENTERS FOR COASTAL OCEAN SCIENCE (NCCOS) AND MEMBER OF THE U.S. COMMISSION ON OCEAN POLICY

Dr. Paul Sandifer is located at the Hollings Marine Laboratory in Charleston, South Carolina. As the NCCOS Senior Scientist, Dr. Sandifer is the principal researcher and scientific advisor on coastal issues to the NCCOS Director. In this role, he identifies national coastal environmental research needs, recommends scientific priorities for NCCOS, defines new approaches for NCCOS science and works with scientists to develop these new initiatives. Before coming to NOAA, Dr. Sandifer was the director of the South Carolina Department of Natural Resources (SCDNR) from July 1997 until April 2003. Following his start at SCDNR in 1972, Dr. Sandifer held various posts, including assistant, associate and senior marine scientist, and assistant director of the Marine Resources Research Institute. In 1984, he was named Director of the Marine Resources Division. While at the Marine Resources Division, he was responsible for developing the agency's aquaculture research and development program, and establishing the James M. Waddell, Jr. Mariculture Research and Development Center. Dr. Sandifer is a past president and honorary life member of the World Aquaculture Society, a fellow of the American Association for the Advancement of Science, and recipient of the Order of the Palmetto, South Carolina's highest civilian honor. He has authored and co-authored more than 120 scientific and technical publications in the fields of marine biology, aquaculture and coastal ecology.

P. LYNN SCARLETT

ASSISTANT SECRETARY OF POLICY, MANAGEMENT, AND BUDGET AT THE DEPARTMENT OF THE INTERIOR

Prior to joining the Bush Administration in July 2001, Lynn Scarlett was President of the Los Angeles-based Reason Foundation, a nonprofit current affairs research and communications organization. For 15 years, she directed Reason Public Policy Institute, the policy research division of the Foundation. Her research focused primarily on environmental, land use, and natural resources issues.

Ms. Scarlett served on Pres. George W. Bush's Environmental Policy Task Force during his presidential campaign. She was appointed by former Gov. Pete Wilson to chair California's Inspection and Maintenance Review Committee, a position she held for 6 years. Ms. Scarlett served as an Expert Panelist on the U.S. Environmental Protection Agency's full-cost accounting and "pay-as-you-throw" projects. She chaired the "How Clean Is Clean" Working Group of the National Environmental Policy Institute from 1993-98 and served at the request of former EPA Administrator William Ruckelshaus on the Enterprise for the Environment Task Force, which examined new directions for U.S. environmental policy.

DR. RICHARD W. SPINRAD

ASSISTANT ADMINISTRATOR OF THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) NATIONAL OCEAN SERVICE.

Dr. Rick Spinrad is the Editor in Chief of Oceanography magazine and has been an elected member of the Council of The Oceanography Society, and has served on numerous professional committees of organizations including the National Academy of Sciences and the American Meteorological Society. Dr. Spinrad also served on the faculty of the U.S. Naval Academy and George Mason University. He has spent over 300 days at sea conducting research, and has published more than 50 scientific articles. Dr. Spinrad is the editor of a textbook on ocean optics and several special issues of marine science journals. In 2003, Dr. Spinrad was awarded the Department of Navy Distinguished Civilian Service Award, the highest civilian award given by the Navy Department.

Dr. Spinrad has broad experience in marine science, technology, operations and policy. During his career, he has worked in a wide range of positions in government, academia, industry and non-governmental organizations. Dr. Spinrad served as President of Sea Tech, Incorporated during that company's development of several now-standard oceanographic sensors. He went on to manage oceanographic research at the Office of Naval Research (including serving as the Navy's first manager of its ocean optics program), eventually becoming the Division Director for all of the Navy's basic and applied research in ocean, atmosphere and space modeling and prediction. In 1994, Dr. Spinrad became the Executive Director of the Consortium for Oceanographic Research and Education (CORE), where he led the development of the National Ocean Sciences Bowl for High School Students, and he co-authored, with Admiral James D. Watkins, "Oceans 2000: Bridging the Millennia", which served as the guiding document for the establishment of the National Oceanographic Partnership Program (NOPP). In 1999, Dr. Spinrad became the Technical Director to the Oceanographer of the Navy.

VIRGINIA TIPPIE

DIRECTOR, COASTAL AMERICA

Virginia Tippie is the founding director of Coastal America, an innovative federal program that combines federal, state, local and private resources and expertise in a working partnership to restore and protect the coastal environment. With more than 700 projects in 26 states, the partnership has restored thousands of acres of wetlands, re-established hundreds of mile of spawning streams, mitigated sources of pollution and protected endangered species. This unique partnership received the Hammer Award for reinventing government in 1998 and was recognized by the Ford Foundation and Harvard University in 1996 for Innovations in American Government.

Ms. Tippie is widely recognized for her skill in encouraging cooperation and collaboration among disparate interests. As Director of the EPA Chesapeake Bay Program in the 80's, she managed a multi million dollar research program and brokered the first federal multi-state agreement to restore and protect the Chesapeake Bay. The Chesapeake Bay Program is now an internationally-acclaimed partnership model for environmental restoration and protection efforts. In the early 90's, as Assistant Administrator of NOAA for Ocean Services and Coastal Zone Management, she facilitated the establishment of a global ocean observing system, modernized the charting program, expanded the marine sanctuary program and improved pollution monitoring and response capabilities. Working with her counterparts in other agencies, she developed the concept of the Coastal America partnership process to enable the federal government to more effectively address the nation's coastal crisis.

CHRISTOPHE TULO

PRESIDENT, CENTER FOR SEACHANGE

Christophe Tulou established the Center for SeaChange in September 2003, following his tenure as Executive Director of the Pew Oceans Commission, and will serve as its President. Prior to joining the Pew Oceans Commission in late 2001, he served as president of Christophe Tulou Associates, an environmental, natural resource, and ocean policy firm in Washington, D.C. From March 1993 to November 1998, Christophe served as then-Delaware Governor Tom Carper's cabinet secretary for the Department of Natural Resources and Environmental Control. Mr. Tulou also served more than a decade in Congress as a Sea Grant fellow, legislative director, and subcommittee staff director. During that time, he authored legislation on coastal development, ocean dumping of wastes, marine mammal health and stranding, hazardous substance reporting, and low-level radioactive waste management.

DR. KEN TURGEON

ASSOCIATE DIRECTOR FOR RESEARCH, EDUCATION AND MARINE OPERATIONS WITH THE U.S. COMMISSION ON OCEAN POLICY

Dr. Ken Turgeon assumed this position on December 3, 2001 after serving five years as the Chief Scientist for the Minerals Management Service, U.S. Department of the Interior. Prior to that, he was the Chief of MMS's Environmental Studies Program for six years. Before joining the MMS in 1988, he spent 8 years with NOAA's National Environmental Science, Data and Information Service in a variety of positions, the last being Acting Deputy Director of the Assessment and Information Services Center. Non-federal government work experience includes environmental consulting and university administration, teaching and research in the United States, Lebanon and Kenya.

JOHN F. TURNER

ASSISTANT SECRETARY OF STATE FOR OCEANS, INTERNATIONAL ENVIRONMENT & SCIENTIFIC AFFAIRS (OES)

In this current capacity, Mr. Turner heads U.S. Department of State programs and activities concerning HIV/AIDS and other infectious diseases, the environment, climate change, oceans affairs, and science and technology. Prior to his current appointment, John Turner was President and Chief Executive Officer of The Conservation Fund, a national nonprofit organization dedicated to public-private partnerships to protect land and water resources. Between 1989 and 1993, he served as the Director of the U.S. Fish and Wildlife Service. He served for nineteen years in the Wyoming State Legislature and is a past President of the Wyoming State Senate. Mr. Turner is a graduate of the University of Notre Dame, and he received a Master of Science degree in Wildlife Ecology from the University of Michigan.

Among Mr. Turner's publications are: *The Magnificent Bald Eagle, Our National Bird*, Random House; "The Private Lands Challenge: Integrating biodiversity, conservation, and private property," *Private Property and the Endangered Species Act*, University of Texas Press; "Land Use: The Forgotten Agenda," in *Thinking Ecologically: The next generation of environmental policy*, Yale University Press; and numerous other publications regarding wildlife conservation, outdoor recreation, and natural resource policies.

JOSEPH A. URAVITCH, AICP

DIRECTOR, NATIONAL MARINE PROTECTED AREA CENTER - NOAA

Joseph Uravitch has worked for over 20 years in the National Oceanic and Atmospheric Administration(s) (NOAA) coastal, Great Lakes, and ocean management programs. During his career in NOAA he has served in various regional positions, as the Associate Director of the Office of Ocean and Coastal Management, and as the manager for NOAA(s) Coastal Zone Management, National Estuarine Research Reserve, and National Marine Sanctuary Programs. In November 2000 he was tasked by NOAA with development of the new National Marine Protected Areas (MPA) Center, and now serves as its Director. The National MPA Center is responsible for designing the framework for a National System of MPAs, providing scientific and technical support for improving the stewardship of MPAs, and consulting in these efforts with Federal, state, and tribal agencies and stakeholders. He received his Bachelors degree from Case Western Reserve University in Cleveland, Ohio, and a Master of Urban and Regional Planning degree from The George Washington University in Washington, D.C. He is a member of the American Institute of Certified Planners. In his current capacity, Mr. Turner heads U.S. Department of State programs and activities concerning HIV/AIDS and other infectious diseases, the environment, climate change, oceans affairs, and science and technology. includes environmental consulting and university administration, teaching and research in the United States, Lebanon and Kenya.

Dr. Turgeon received his Ph.D. in Zoology in 1973 from the University of New Hampshire and his M.A. in Biological Oceanography in 1968 from the Virginia Institute of Marine Science, College of William and Mary. His B.S. degree is in biology from Stonehill College in 1965.

Attachment C

CELIC Delegation Roster (Includes students, teacher, CELC education director)

Seattle Aquarium

Timon Berry
Casey Clark
Kelsey Clinton
Courtney Hammer
Martina Kartman
Shawn Doan
Mark Plunkett

Dauphin Island Sea Lab

Priscilla Dabney
Joan Turner
Alison Gamble
Cassie Stokes
Christopher Evans
Margaret Stewart
Brandon Johnson

Alaska SeaLife Center

Gordon Byrnes
Kyle DeLoach
Kelsey Potdevin
Jennifer Stevenson
Elizabeth Stickel
Clay Good
Amy Haddow

Waikiki Aquarium

Angela Li
Diana Wan
Anthony Loui
Kit U. Leong
Mickey Nguyen
Mark Heckman
Barbara Rogers

Hatfield Marine Science Center

Jason Brazel
Katie Collson
Jessica Haxel
Yuanbo Liu
Allison Frintz

Emily Rackleff
Tracie Sempier

South Carolina Aquarium

Edwin W. McMillan
Julie Cliff
Felicity Lenes
Michael Sautter
Justin Rose
Lily Wald
Richard Jones

Monterey Aquarium

Kelly Keifer
Marlee Payne
Brian Stewart
Michael Badger
Bethany Taylor
Josie Hardy
Rita Bell

New York Group

Alias Politano
Kerri Orloff
Amanda Rollizo
Melissa Carp
Cathy Orloff
Amanda Rollizo

Florida Aquarium

Deborah Berger
Kristy Loman Chiodo
Nisa Alvarado
Matt Aviles
Whitney Grubbs
Anthia Moore
Sarah Nakhleh

New England Aquarium

Sarah Baumgardner
Will Chen
Jared Berkowitz
Yakov Rabinovich
Adam Chao
Douglas Grant
Michelle Wildes

IFGA Fishing Hall of Fame & Museum

Pedro DeCastro
Cassy Meyers

Jessica McGuinnes
Chris Rokicki
Jessica Lee Jones
Dawn Miller

Texas State Aquarium

Tara Schultz
Lesley C. Urasky
Jarrett W. Lassig
Tyler D. Evans
Pooja Koolwal
Charles B. Blakemore
Jessica Haralson

Aquarium of the Pacific

Jazzmin Mason-Berry
Rachel Frankenfield
Caitlin Ott-Conn
Samantha Peake
Nathan Kogen
Eugene Williams

National Aquarium in Baltimore

Vicki Fabiyi
Candice Haynes
Nicholas Lukanich
William Greene
Andrew Wright
Shakeya Philpotts

AGENDA
NATIONAL STUDENT SUMMIT ON OCEAN ISSUES

January 14, 15 & 16, 2004

NOAA SCIENCE CENTER
Silver Spring, Maryland

Tuesday, January 13th

5:30 -7:00 p.m. **Official Summit Registration** and Informal Reception at the Assembly Conference Room, Hilton Hotel, Silver Spring, MD - Rooftop “Beach Party” to follow.

Wednesday, January 14th

NOAA Science Center, 1305 East West Highway, Silver Spring, MD

8:00 - 8:15 a.m. **Welcome** - Objectives of the Summit, review of the agenda and introduction of co-sponsors in attendance
Virginia K. Tippie, Director, Coastal America
Timothy R. E. Keeney, Deputy Assistant Secretary for Oceans and Atmosphere, NOAA, Department of Commerce

8:15 - 9:15 a.m. **US Commission on Ocean Policy Report**
Dr. Paul Sandifer, Commissioner & Chair, Stewardship Working Group

_____ Commenters:

Christopher Mann, Director of Policy, SeaChange and Former Director, Ocean and Coastal Policy, PEW Oceans Commission
Tony MacDonald, Executive Director, Coastal States Organization

9:15 - 10:15 a.m. **Storm Over Stellwagen**
Marine Sanctuaries & Immersion Studios representatives introduce their interactive education teaching unit and students play “SOS” Storm Over Stellwagen
Stuart Morris, Immersion Studios

10:15 - 10:30 a.m. **Break**

10:30 - Noon	Regional Issue Presentations by Coastal Ecosystem Learning Center (CELC) Student Teams Marine Protected Areas - <i>Monterey Bay Aquarium Team</i> Managing Marine Protected Areas - <i>New England Aquarium Team</i> Coral Reefs - <i>Waikiki Aquarium Team</i> Habitat Damage Due to Bottom Trawling - <i>Alaska SeaLife Center Team</i> Spartina: An Invasion in Progress - <i>Seattle Aquarium Team</i> Aquaculture's Effect on Coastal Ecosystem Systems (Salmon) - <i>Hatfield Marine Science Center Team</i> Spartina: An Invasion in Progress - <i>Seattle Aquarium Team</i>
Noon - 1:00 p.m.	Lunch - "Stewardship of the Oceans" <i>Introduction by Marlene Kaplan, NOAA</i> <i>Keynote by Samuel W. Bodman, Deputy Secretary, Department of Commerce</i>
1:30 - 3:30 p.m.	Continue Regional Issue Presentations Estuary Degradation in Texas - <i>Texas State Aquarium Team</i> Project Clean: A Salt Marsh Restoration - <i>New York Aquarium Team</i> Coastal Zone Management - <i>Dauphine Island Sea Lab Team</i> Human Influences on Oyster Populations in the Chesapeake Bay - <i>National Aquarium in Baltimore Team</i> Stormwater Run-off: The Pointless Pollutant - <i>The Florida Aquarium Team</i> Non-Point Pollution - <i>Long Beach Aquarium of the Pacific Team</i> Coastal Population Density Effects on Ocean Ecosystems - <i>South Carolina Aquarium Team</i> Impacts of Coastal Development on Florida Fisheries - <i>IGFA Team</i>
3:45 - 4:00 p.m.	Load buses at Science Center - Travel to National Aquarium in Baltimore
4:00 - 5:30 p.m.	During the bus ride - chaperons will continue working with the groups on consolidating the regional issues into a National Presentation
5:30 - 7:00 p.m.	National Aquarium in Baltimore Greeted by youth program escorts and proceed to Pier 3 to Aquarium on Wheels exhibits. Aquarium youth program members will explain their exhibits and live animals, followed by a self-guided tour of the Aquarium.

7:00 - 8:15 p.m. Dinner With Ocean Issues Experts

Introduction of Ocean Issues Experts and Speakers by,
Virginia K. Tippie, Director, Coastal America

Remarks by:

David Pittenger Executive Director, National Aquarium in Baltimore
Cindy Angelelli, Chair, Corporate Wetlands Restoration Partnership, and
Director Environment, Health and Safety, Duke Energy

Keynote by:

Dr. Donald Boesch, President, Center for Environmental Science,
University of Maryland

8:15 - 9:30 p.m. Resume Tour of Aquarium

9:30 p.m. Board buses - Return to Hilton Hotel, Silver Spring, MD

Thursday, January 15th

8:00 - 10:45 a.m. Working Session

Overview of the Process:

Virginia K. Tippie, Director, Coastal America

Organize with facilitators to prepare National Ocean Issues Presentation and the
Students Commitment For Action on Ocean Issues

10:45 - 11:00 a.m. Break

11:00 - 11:30 a.m. Students Present their Consolidated Summaries of National Ocean Issues to
Expert Panel for Critique.

11:30 - Noon Panel Responds to Presentations

Moderator:

Margaret A. Davidson, Director, NOAA Coastal Services Center

Panelists:

Dr. Don Davis, Administrator, Louisiana Coastal R&D Program
Roger Griffis, NOAA & Coral Reef Task Force
Dr. Bruce Molnia, House Oceans Caucus and USGS
Dr. Ken Turgeon, Associate Director, U.S. Ocean Commission
Joseph Uravitch, Director, NOAA Marine Protected Areas Center

Noon - 1:00 p.m. Lunch - “Understanding our Oceans”

Jim Yoder, Director, Ocean Sciences Division, National Science Foundation
Dr. Richard W. Spinrad, Assistant Administrator for NOAA Oceans and Coasts

1:00 - 3:00 p.m.

Split Groups (2 groups):

Group 1 - National Issue Paper Facilitator and Presenters who will polish the final National Issues Presentation

Group 2 - Delegates will polish the Students Commitment for Action on Ocean Issues

3:00 - 4:00 p.m.

Travel to the National Geographic Society

1145 17th Street, N.W., Washington, D.C.

4:00 - 4:10 p.m.

National Ocean Issues Presentation

Introduction by,

Virginia K. Tippie, Director, Coastal America

Welcome to the National Geographic Society by,

Terry Garcia, Executive Vice President, National Geographic Society

4:10 - 4:40 p.m.

Students Present Final National Ocean Issues Paper to panel of Ocean Commissioners

4:40 - 5:30 p.m.

Panel Responds to Presentation

Moderator:

The Honorable Wayne T. Gilchrest, Chairman, Fisheries Conservation, Wildlife and Oceans Subcommittee, U.S. House of Representatives

Commission on Ocean Policy Panel:

Dr. Paul Sandifer, Senior Scientist for NOAA's National Centers for Coastal Ocean Sciences, Chairman of the Ocean Commission Stewardship Working Group

Paul L. Kelly, Commissioner and Senior Vice President, Rowan Companies

Christopher Koch, Commissioner and President of World Shipping

5:30 - 7:00 p.m.

Reception & Dinner With Ocean Policy Leaders

Introduction of Coastal America Principals, Sponsors and Distinguished Guests:

Virginia K. Tippie, Director, Coastal America

National Ocean Agenda”

Introduction:

James L. Connaughton, Chairman, Council on Environmental Quality

Executive Office of the President and Chair, Coastal America

Keynote:

The Honorable Wayne T. Gilchrest, Chairman, Fisheries Conservation,

Wildlife and Oceans Subcommittee, U.S. House of Representatives

7:00 - 8:30 p.m. **“Exploring the Oceans”**
Terry Garcia, Executive Vice President, National Geographic Society
Greg Marshall, Crittercam Project Director, National Geographic Society

9:30 p.m. **Return to Hilton Hotel, Silver Spring, MD**

Friday, January 16th

8:00 - 9:00 a.m. Travel by bus to Old Executive Office Building of the White House.
Enter through Pennsylvania Avenue Main Entrance.

9:00 - 10:30 a.m. **Closing Ceremony - Old Executive Office Building, Presidential Hall (room 450).**

Welcome by Coastal America Chairman

James L. Connaughton, Chairman, White House Council on Environmental Quality

Opening Remarks

Dr. Sylvia A. Earle, National Geographic Explorer-in-Residence

**Students Present Conclusions and Recommendations on the National Issues and
Their Commitment to Action on Ocean Issues to Coastal America Principals**

Coastal America Principals respond to presentation:

James L. Connaughton, Chairman, White House on Environmental Quality

P. Lynn Scarlett, Assistant Secretary of Interior for Policy, Management and Budget

Benjamin H. Grumbles, Acting Assistant Administrator for Water, EPA

Timothy R.E. Keeney, Deputy Asst. Secretary of Commerce for Oceans & Atmosphere

John S. Turner, Assistant Secretary of State for Oceans & Environment

10:30 - 11:00 a.m. Closing Remarks and Presentation of Certificates of Recognition

*James L. Connaughton, Chairman, White House Council on
Environmental Quality*

11:00 - Noon Reception in Indian Treaty Room (Room 474)

Noon Group photo in Indian Treaty Room of Old Executive Office Building

NATIONAL STUDENT SUMMIT ON OCEAN ISSUES
COMMITMENTS TO ACTION

As high school students we are aware of ocean issues.

1. We commit to raising the awareness of others by presenting educational programs to elementary schools about ocean issues.
2. We will develop an award program to publicly recognize and reward the "Green Behavior" at our schools and in our communities.
3. Knowing that the ocean is adversely impacted by non point source, we will start a recycling program at our schools.
4. Talk to local legislative representatives expressing concerns over the prevalent environmental issues, offering solutions, and encouraging both the funding needed and the education of the general public with respect to these concerns.
5. Promote awareness and consumption of sustainable seafood and support healthy, eco-friendly farming techniques.
6. Label the sewers so that people know how drainage flows into our oceans and how it adversely affects our environment.
7. Develop a series of public workshops focused on educating the masses.
8. Post legible signs against illegal dumping, which include the fines involved.
9. Use media to educate the public on ocean issues by promoting public service announcements on radio, TV, cable, in the newspaper, and through civic groups.
10. Educational Plays in the community focused on elementary school-aged children.
11. Organize community clean-ups of wetland areas making the public aware of these activities through fliers and posters.
12. Grass planting along coastal areas.
13. Contact the Nature Conservancy and local organizations for current information and volunteer opportunities.

14. Write a children's book heralding environmental issues.
15. Adopt an estuary, just like concerned citizens adopt highways.
16. Sponsor field trips to introduce/educate children on environmental issues affecting their lives and help out in local environmental projects.
17. Get involved in data collection for federal and nonprofit organizations.
18. Sponsor environmental clean-ups involving children.
19. Commit to use public transportation and encourage others to do the same as a means of helping to fight pollution and to save our coral reefs.
20. Commit to conserve energy through promoting efficient lighting at our schools, businesses and homes.
21. Partner with Panetta Institute to lobby for and implement small specifically placed marine reserves.
22. Sponsor environmental awareness days such as "Science Saturday" and "Plant Sea Oats Days" to involve the community.
23. Volunteers will educate members of their community to use environmentally safe methods when disposing of oil.
24. Encourage volunteerism at ocean-related organizations promoting conservation.
25. Encourage students to participate in ocean-related activities such as the National Ocean Science Bowl.
26. Promote school/community activities in celebrating National Oceans Day on June 8th with appropriate entertainment and documentary movie showings, kayak outings and other fundraisers. All funds raised would be donated to regional marine environmental and conservancy groups.
27. Lobby for community officials to install more recycling bins and trash cans along beach areas.
28. Form Regional Ocean Conservation Clubs (ROCCs) nationwide.
29. Contact our city officials to have hoods installed in the storm drains.

NATIONAL STATEMENT:

The students at this summit have committed to many actions to help mitigate some serious national ocean issues. The following activity captures the spirit of these commitments...

The Regional Ocean Conservation Club (ROCC) is made up of high schools interested in ocean conservation. High schools would utilize their partnerships with colleges and other organizations to enact projects dealing with specific problems within their region. This is a way to implement everyone's plan of action so that we can all work together for the betterment of our environment.

The Regional Student Summit Group sponsored by IGFA has inaugurated this movement by networking with the other thirteen regional student summit groups who took part in the National Student Summit on Ocean Issues.

REGIONAL STATEMENT:

Across our country, different regions have specific ocean-related environmental problems, such as unmarked storm sewers, need for student volunteering, lack of recycling and trash bins on beaches, and local energy conservation. Various regional students who were delegates to the National Student Summit on Ocean Issues have committed to actions that will both bring awareness to ocean-related problems of the specific regions and participate in activities themselves that will relieve the impact of such problems.

EVALUATION

Name (optional) _____

Student _____ Teacher _____ Expert _____

Thank you for participating in the January 14-16 National Student Summit on Ocean Issues.

Please take a moment to answer the questions below. Rate the following statements by circling the answer that best matches your feelings and answer the questions that follow. We value your opinion.

Overall Conference Experience	Excellent	Good	Fair	Poor
Speakers	Excellent	Good	Fair	Poor
Student Presentations	Excellent	Good	Fair	Poor
Discussion with Experts	Excellent	Good	Fair	Poor
Moderated Breakout Sessions	Excellent	Good	Fair	Poor
Expert Responses at NOAA	Excellent	Good	Fair	Poor
Ocean Commission Response	Excellent	Good	Fair	Poor
Policy Leader Response	Excellent	Good	Fair	Poor
Storm Over Stellwagon	Excellent	Good	Fair	Poor
Critter Cam	Excellent	Good	Fair	Poor
Food & Activities	Excellent	Good	Fair	Poor
Field Trips:				
Baltimore Aquarium	Excellent	Good	Fair	Poor
National Geographic	Excellent	Good	Fair	Poor
Old Executive Office Bld.	Excellent	Good	Fair	Poor

1. Did you feel prepared for the conference? Why or why not?
2. What was the best part of the conference? Why?
3. What speakers did you believe were best? Why?
4. Which part of the conference was the highlight for you? Why?
5. If you were to attend another ocean summit, what would you do to improve it? What would the focus be?
6. What was the most memorable part of meeting students from other coastal areas?
7. In you own words complete the following sentences: (a) before I came to the Student Conference I thought _____, and now I think _____.
8. What is the one thing you would advise another student attending a future ocean summit?
9. What positive action(s) have you taken to implement the Students' Commitments to Action?
10. Did you find the lunches and dinners with experts useful? How?
11. What one quote/comment would you give to a newspaper about the Summit? Can we quote you? If so name please.